



Are supplemental pages for land status included in Appendix C?  Yes  No

Affected ADL: 25514 Date Effective: 2/1/1965 Date Assigned: 11/1/2014

Oil And Gas Lessee(s): Hilcorp Alaska, LLC50%WI; BP Exploration (Alaska) Inc. 50% WI

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement:  Yes  No

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Moos Pad Flowline Route - END	U013N0009E Sec. 13	LAT_DD_N83: 70.490070; LON: -149.615741
<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>	<a href="#">Click here to enter text.</a>
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**2. State of Alaska Surface Lands:**

Are supplemental pages for land status included in Appendix C?  Yes  No

Oil And Gas Mineral Estate Owner: [Click here to enter text.](#)

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
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**3. Private Lands:**

Are supplemental pages for land status included in Appendix C?  Yes  No

Oil And Gas Mineral Estate Owner: State of Alaska – No private surface or mineral estate.

Surface Ownership And Access Agreement(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
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**SECTION VI: SEQUENCE AND SCHEDULE OF OPERATIONS**

Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1.	Season 1 Ice Road Construction	12/1/2016	2/1/2017
2.	Gravel Mining and Placement (Moose Pad, Access Road, and Tie-In Pad)	12/15/2016	3/31/2017
3.	Gravel Turning and Compaction (Moose Pad, Access Road, and Tie-In Pad)	7/1/2017	8/31/2017
4.	Culvert Placement	7/1/2017	8/31/2017

5.	Power & Fiber Installation and Associated Trenching	7/1/2017	10/31/2017
6.	Late Summer Supplemental Gravel Work (Flowline Tie-In Pad and Spine Road widening for flowline crossing.)	9/25/2017	10/31/2017
7.	Season 2 Ice Road Construction	12/1/2017	2/1/2018
8.	Pipeline Installation	12/15/2017	5/1/2018
9.	Facility Installation	5/1/2018	9/31/2018
10.	Drilling Program	9/1/2018	NA

**SECTION VII: PROJECTED USE REQUIREMENTS**

**1. Describe the proposed operations, including the location and design, of Well Sites:**

No Change

**2. Describe the proposed operations, including the location and design, of Buildings:**

Addition of electrical cabinet on repurposed Electrical Cabinet Pad located at east side of Moose Pad Access Road & MPU Spine Road intersection. See attached project description for further information.

**3. Describe the proposed operations, including the location and design, of Fuel and Hazardous Substances:**

No Change

**4. Describe the proposed operations, including the location and design, of Solid Waste Sites:**

No Change

**5. Describe the proposed operations, including the location and design, of Water Supplies:**

No Change

**6. Describe the proposed operations, including the location and design, of Utilities:**

Development of the Schrader Bluff reservoir at Moose Pad will require the addition of two (2) new oil flowlines to transport production fluids to Central Facilities Pad (CFP). Due to the increased production within the MPU, produced fluids from MPU-F and MPU-L pads will be routed to Moose Pad for primary separation in a new flowline. After primary separation at Moose Pad, produced oil from MPU-F, MPU-L and Moose Pad will be transported to CFP through a second new flowline. The two new flowlines will be installed on a single pipe rack from Moose Pad to the existing pipe rack that connects MPU-F/L to CFP. Preliminary pipeline engineering drawings are located in Appendix C. In general, the Moose Pad flowlines will be installed 500' north of the Moose Pad Access Road to the maximum extent practicable to facilitate caribou crossing concerns raised by the NSB and ADF&G during initial review of the Moose Pad Permit Application. The Moose Pad flowline route and orientation is shown in figure 3. Based on environmental and topographical conditions that exist in the project area, the flowlines will be separated from the Moose Pad access road at varying distances outside of the 500' to 1000' corridor in the following areas:

- Initial 500' Separation – After crossing under the MPU Spine road, the Moose Pad flowline alignment immediately maintains a minimum of 500' separation for caribou crossing from the Moose Pad access road. This minimum separation is maintained as the flowlines continue west for approximately 1.57 miles, until the flowline corridor encounters multiple large surface water bodies in Section 13.
- Primary Bottleneck – In the center of section 13, the flowline corridor encounters multiple large and impassable water bodies that must be constructed around. Constructing the flowlines to the north of these water bodies places the pipeline outside of the NSB recommended maximum separation of 1000' and placing the pipeline to the south of these water bodies places the pipeline inside of the NSB and ADF&G recommended separation of 500'. A decision was reached with the NSB, ADF&G, and Hilcorp to route the pipeline to the south (closer to the access road) for the segment where the impassable water bodies exist. In this area, the pipeline angles in towards the Moose Pad Access Road and the separation ranges from 50 to 500' for approximately 0.6 Miles where the water bodies are passed, and recommended separation can be gained again.
- Secondary 500' Separation – Where the Moose Pad flowlines meet the gravel pad, achieving the recommended 500' separation is difficult due to the presence of surface water bodies and relic lake beds. Relic lake beds pose engineering challenges due to the presence of underlying thaw bulbs and/or ice lenses that are problematic for VSM installation and Pipeline Integrity. As the Moose Pad flowlines move past the previously described surface water body bottleneck, the flowline alignment angles away from the Moose Pad access road, allowing for approximately 0.22 miles of 500' separation, which is the maximum amount geographically allowable from an engineering and constructability standpoint. The new flowlines will be installed on vertical support members (VSMs) designed similar to the existing VSMs along MPU Spine Road. Pipeline VSM installation is anticipated to cover approximately 0.05 acres of footprint and utilize an additional 50 Cu yds. of gravel fill. The new flowlines will transition from VSMs to a buried pipeline to cross the MPU Spine Road and will return to VSMs to tie into the existing F/L flowline on the east side of MPU Spine Road. The placement of the two new flowlines buried in the MPU Spine road will require extra fill to increase the depth of gravel over the flowline crossing. To maintain the recommended road side-slope angle, the road footprint will widen slightly at the flowline crossing. Approximately 0.007 acres of fill will

be required to be placed to complete the road crossing, as shown in Appendix B, Sheet 6. At the primary MPU Spine Road crossing, there will be two 30" casings as well as one 24" casing for potential future pipeline or utility crossings. The Moose Pad Development Project will require power and fiber optic cables to operate on-pad infrastructure and provide for drilling and maintenance operations. Primary power to operate Moose pad will be generated on MPU L-Pad, and secondary/backup power will be generated at the Milne Central Facility. Primary power and fiber optic cables will be trenched within the existing MPU Spine Road from the existing electrical switch house at MPU-L Pad to the Electrical Cabinet Pad located at the intersection of the MPU Spine Road and the Moose Pad Access Road. Details of the Electrical Cabinet Pad are in Appendix A, Sheet 13. From the Electrical Cabinet Pad all power and fiber optic cables will then be trenched in the Moose Pad Access Road bed to Moose Pad. Secondary/backup power will tie into the existing powerline on the east side of the MPU Spine Road, and be trenched into the tundra from the nearest pole length to the Electrical Cabinet Pad located at the intersection of the Milne Point Spine Road and the Moose Pad Access Road. See attached project description for further information.

**7. Describe the proposed operations, including the location and design, of Material Sites:**

No Change

**8. Describe the proposed operations, including the location and design, of Roads:**

Installation of the new flowlines will require the addition of a small gravel pad at the junction of the new Moose Pad flowlines and the existing F/L flowline. Access to the junction is required to facilitate the installation and maintenance of the tie-in valves. This new tie-in pad will be approximately 100 ft. by 120 ft. at the top and 120 ft. by 140 ft. at the base (1.002 acres) with 2:1 side slopes, and is estimated to require approximately 8,100 Cu yds. of gravel fill. An 18' wide access road will be installed from the Milne Point Spine Road to the tie-in pad to facilitate access to the pad. To avoid disrupting the natural drainage and to allow fish passage, culverts will be sized accordingly and installed within the roadbed. The placement of the two new flowlines buried in the MPU Spine road will require extra fill to increase the depth of gravel over the flowline crossing. To maintain the recommended road side-slope angle, the road footprint will widen slightly at the flowline crossing. Approximately 0.007 acres of fill will be required to be placed to complete the road crossing. See attached project description for further information.

**9. Describe the proposed operations, including the location and design, of Airstrips:**

No Change

**10. Describe the proposed operations, including the location and design, of All Other Facilities and Equipment:**

No Change

**11. If another permit(s) is required for the above described Projected Use Requirements, provide the following information:**

Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
ADNR - DOG	Lease Operations - Amendment	LONS 16-008	Submitted	Misc.
NSB	Development Permit	NSB 17-071	To Be Submitted	Misc.
USACE	POA Amendment	POA-2015-630	To Be Submitted	Misc.
All Others Originally Identified	Existing permits still valid with exceptions to the following which will need modification:	Misc.	Still Valid	Misc.
Enter Agency.	Enter Permit Type.	Enter Permit Number.	Enter Application Status.	Enter Projected Use Requirement(s).
Enter Agency.	Enter Permit Type.	Enter Permit Number.	Enter Application Status.	Enter Projected Use Requirement(s).

**SECTION VIII: REHABILITATION PLAN**

**1. Proposed Level of Infrastructure, Facilities and Equipment Removal:**

No Change

**2. Description of Restoration and Rehabilitation Activities for Vegetation, Habitat, Impacted Wildlife, and Other Applicable Resources:**

No Change

**SECTION IX: OPERATING PROCEDURES DESIGNED TO MINIMIZE ADVERSE EFFECTS**

Describe operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the Lease area and adjacent areas including:

Fish and Wildlife Habitats: No Change

Historic and Archeological Sites: No Change

Public Use Areas: No Change

**SECTION X: GLOSSARY OF TERMS**

Term #	Term	Term Definition
1.	Enter Term.	Enter Term Definition.
2.	Enter Term.	Enter Term Definition.
3.	Enter Term.	Enter Term Definition.
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8.	Enter Term.	Enter Term Definition.
9.	Enter Term.	Enter Term Definition.
10.	Enter Term.	Enter Term Definition.

**SECTION XI: CONFIDENTIALITY**

The undersigned hereby requests that each page/section of this application marked confidential be held confidential under AS 38.05.035(a)(8).

APPLICANT CONTACT:

Sign here. _____	Enter Name. _____	Enter Title. _____	Enter Date. _____
Signature	Name	Title	Date

See the attached Revised Project Description for the Moose Pad Project.

**APPENDIX B: MITIGATION MEASURES**

See the attached Mitigation Measures for the Moose Pad Project.

APPENDIX C: OTHER

See the attached Supplemental Land Use Information Moose Pad Project.



**LAND STATUS: SUPPLEMENTAL SECTION**

**1. State Mineral Estate:**

Affected ADL: 25515                      Date Effective: 2/1/1965                      Date Assigned: 11/1/2014  
 Oil And Gas Lessee(s): Hilcorp Alaska, LLC 50%WI; BP Exploration (Alaska) Inc. 50%WI  
 Surface Ownership: State of Alaska  
 Do you have, or anticipate having an Access Agreement:     Yes                       No  
 Special Use Lands:    [Click here to enter text.](#)  
 Jointly Managed Lands:    [Click here to enter text.](#)  
 Other Considerations:    [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Moose Pad Flowline Route - MIDPOINT	U013N010E Sec. 18	LAT_DD_N83: 70.483868; LON_DD_N83: -149.672223
Moose Pad Flowline Route - START	U013N010E Sec. 17	LAT_DD_N83: 70.486816; LON_DD_N83: -149.723171
Moose Pad Electric TIE-IN Pad	U013N010E Sec. 17	LAT_DD_N83: 70.487726; LON_DD_N83: -149.615483

Affected ADL: 25509                      Date Effective: 2/1/1965                      Date Assigned: 11/1/2016  
 Oil And Gas Lessee(s): Hilcorp Alaska, LLC 50%WI; BP Exploration (Alaska) Inc. 50%WI  
 Surface Ownership: State of Alaska  
 Do you have, or anticipate having an Access Agreement:     Yes                       No  
 Special Use Lands:    [Click here to enter text.](#)  
 Jointly Managed Lands:    [Click here to enter text.](#)  
 Other Considerations:    [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Moose Pad Flowline TIE-IN Pad	U013N010E Sec. 8	LAT_DD_N83: 70.490101; LON_DD_N83: -149.616238
Moose Pad Flowline Road Crossing	U013N010E Sec. 8	LAT_DD_N83: 70.496694; LON_DD_N83: -149.635536
Moose Pad Trenching L-Pad - END	U013N010E Sec. 8	<a href="#">Click here to enter text.</a>

Affected ADL: [Enter ADL.](#)                      Date Effective: [Enter Date.](#)                      Date Assigned: [Enter Date.](#)  
 Oil And Gas Lessee(s):    [Click here to enter text.](#)  
 Surface Ownership:    [Click here to enter text.](#)  
 Do you have, or anticipate having an Access Agreement:     Yes                       No  
 Special Use Lands:    [Click here to enter text.](#)  
 Jointly Managed Lands:    [Click here to enter text.](#)  
 Other Considerations:    [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
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Other Considerations: [Click here to enter text.](#)

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
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Oil And Gas Mineral Estate Owner: [Click here to enter text.](#)

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

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Oil And Gas Mineral Estate Owner: [Click here to enter text.](#)

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

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### 3. Private Lands:

Oil And Gas Mineral Estate Owner: [Click here to enter text.](#)

Surface Ownership And Access Agreement(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

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Oil And Gas Mineral Estate Owner: [Click here to enter text.](#)

Surface Ownership And Access Agreement(s): [Click here to enter text.](#)

Special Use Lands: [Click here to enter text.](#)

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: <a href="#">Click here to enter text.</a>		
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Oil And Gas Mineral Estate Owner: <a href="#">Click here to enter text.</a> Surface Ownership And Access Agreement(s): <a href="#">Click here to enter text.</a> Special Use Lands: <a href="#">Click here to enter text.</a> Jointly Managed Lands: <a href="#">Click here to enter text.</a> Other Considerations: <a href="#">Click here to enter text.</a>		
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